

Listing of Claims

1. (Currently Amended) A method for increasing use time of a battery of a mobile station (MS) of a communication system, comprising:

identifying a use of the MS based on subscriber information stored in a network circuit, said identifying being performed by the network circuit or another network circuit;

determining a slot cycle index value for the MS based on said use;

transmitting the slot cycle index value to the MS;

setting the slot cycle index value in the MS; and

retrieving slots of a paging channel in the MS according to the set slot cycle index value, wherein said retrieving includes:

computing a retrieval period for a paging channel as follows:

$$\text{Retrieval Period} = N * 2^{\text{SCI}} * T$$

where N is a first constant value, SCI corresponds to the set slot cycle index value, and T is a second constant value equal to a predetermined slot period.

2. (Original) The method of claim 1, wherein the slot cycle index value is a positive number of 0 to 7.

3. (Canceled)

4. (Previously Presented) The method of claim 1, further comprising:

setting the received slot cycle index value when a message input from the user indicates changes of a retrieval period;

reporting completion of setting the slot cycle index value to an upper system; and

storing the slot cycle index value into a slot cycle index field of a retrieval period information table for the MS in the upper system.

5. (Previously Presented) The method of claim 4, wherein the slot cycle index value is stored in a certain field of an order message transmitted through a paging channel to the MS.

6. (Currently Amended) A method for increasing use time of a battery of a mobile station (MS) of a communication system, comprising:

identifying a use of the MS based on subscriber information stored in a network circuit, said identifying being performed by the network circuit or another network circuit;

determining a slot cycle index value for the MS based on said use;

transmitting the slot cycle index value to the MS;

setting the slot cycle index value in the MS; and

retrieving slots of a paging channel in the MS according to the set slot cycle index value, wherein said retrieving the slots of the paging channel comprises:

comparing the slot cycle index value transmitted based on the identified use with a slot cycle index value previously ~~transmitted to and~~ set in the MS;
choosing a smaller value; and
retrieving the slots of the paging channel as the MS transitions from a sleep state to an active state according to the chosen slot cycle index value.

7. (Previously Presented) A method for increasing use time of a battery of a mobile station (MS) of a communication system, comprising:

setting a retrieval period of slots of a paging channel according to a use of the MS;
wherein said use is one indicated by subscriber information registered in a network circuit and
wherein the retrieval period is set based on the following equation:

$$\text{Retrieval Period} = N * 2^{\text{SCI}} * T$$

where N is a first constant value, SCI corresponds to the set slot cycle index value, and T is a second constant value equal to a predetermined slot period;

registering the retrieval period in an upper system; and
retrieving the slots of the paging channel as the MS transitions from a sleep state to an active state in the registered retrieval period.

8. (Original) The method of claim 7, wherein said registering the retrieval period comprises:

setting a slot cycle index value corresponding to the retrieval period in the MS;
transmitting the set slot cycle index value to the upper system; and
storing the slot cycle index value into a slot cycle index field of a retrieval period information table for the MS in the upper system.

9. (Currently Amended) A method for increasing use time of a battery of a mobile station (MS) of a communication system, comprising:

identifying one or more uses of the MS based on a subscriber information of the MS in an upper system;

deciding a retrieval period of a paging channel of the MS according to the one or more uses, and transmitting information indicative of the retrieval period to the MS;

setting the retrieval period in the MS;

registering the set retrieval period in the upper system; and

retrieving the paging channel in the MS as the MS transitions from a sleep state to an active state in the registered retrieval period, wherein retrieving the paging channel comprises:

setting a slot cycle index value that is periodically transmitted to the MS from the upper system as a maximum value;

comparing the slot cycle index value received from the upper system with a slot cycle index value previously set in the MS, and choosing a smaller value; and
retrieving the slots of the paging channel in the retrieval period.

10. (Original) The method of claim 9, wherein said setting the retrieval period comprises:

receiving a message containing the in which a slot cycle index value transmitted from the upper system ~~corresponding to the retrieval period is stored from the upper system;~~
reporting receipt of the message to a user; and
setting the received slot cycle index value when a message input from the user indicates of change of a retrieval period of the paging channel.

11. (Original) The method of claim 10, wherein the slot cycle index value is stored in a certain field of an order message.

12. (Currently Amended) The method of claim, 9, wherein said registering the retrieval period comprises:

setting the slot cycle index value, corresponding to the received retrieval period, in the MS, and then reporting completion of the setting to the upper system; and
storing the slot cycle index value into a slot cycle index field of a retrieval period information table for the MS in the upper system.

13. (Currently Amended) The method of claim 7 ~~or 9~~, wherein retrieving the slots of the paging channel comprises:

setting the slot cycle index value that is periodically transmitted to the MS from the upper system as a maximum value;

comparing the slot cycle index value received from the upper system with ~~the set a~~ slot cycle index value previously set in the MS, and choosing a smaller value; and

retrieving the slots of the paging channel in the retrieval period.

14. (Previously Presented) A method for controlling a mobile station (MS) of a communication system, comprising:

identifying a plurality of mobile stations based on uses thereof by:

- (a) searching subscriber information stored in at least one network circuit, and
- (b) determining uses of the mobile stations based on the searched subscriber information, the subscriber information indicating a use of a first mobile station different from a use of a second mobile station; and

determining a slot cycle index value for the first mobile station based on the use of the first mobile station determined in (b);

determining a slot cycle index value for the second mobile station based on the use of the second mobile station determined in (b);

transmitting the slot cycle index values to the first and second mobile stations; and

setting slot cycle index values in the first and second mobile stations according to the uses.

15. (Original) The method of claim, 14, wherein the slot cycle index value is a positive number of 0 to 7.

16. (Previously Presented) The method of claim 14, wherein said setting includes:
setting the first and second mobile stations to different retrieval periods of slots of respective paging channels based on the slot cycle values transmitted to the first and second mobile stations.

17. (Canceled)

18. (Canceled)

19. (Previously Presented) The method of claim 14, wherein the slot cycle index values are included in order messages transmitted to the first and second mobile stations.

20. (Previously Presented) The method of claim 1, wherein the slot cycle index value is set in the MS based on a message received from a user of the MS, said message authorizing the MS to change a slot cycle index value previously stored in the MS to the transmitted slot cycle index value.

21. (Previously Presented) The method of claim 1, wherein said use is servicing a call.

22. (Currently Amended) A method for increasing use time of a battery of a mobile station (MS) of a communication system, comprising:

identifying a use of the MS based on subscriber information stored in a network circuit, said identifying being performed by the network circuit or another network circuit;

determining a slot cycle index value for the MS based on said use;

transmitting the slot cycle index value to the MS;

setting the slot cycle index value in the MS; and

retrieving slots of a paging channel in the MS according to the set slot cycle index value, wherein said use is a position-tracing use performed by the MS, the slot cycle index value corresponding to said position-tracing use having a value larger than a slot cycle index value that corresponds to a use that requires real-time reception of paging messages.

23. (Previously Presented) The method of claim 1, wherein said use is transmitting a character message.

24. (Previously Presented) The method of claim 1, wherein the stored subscriber information includes billing information stored in a billing center.

25. (Previously Presented) The method of claim 1, wherein the stored subscriber information includes registration information stored in a home location register.

26. (Canceled)

27. (Previously Presented) The method of claim 1, wherein the network circuit or said another network circuit is selected from a message switching center, a base station, or a home location register.

28. (Previously Presented) The method of claim 14, wherein the slot cycle index value is set in the first and second mobile stations based on messages received from users of the first and second mobile stations MS, each of said messages authorizing a respective one of the first and second mobile stations to change a slot cycle index value previously stored to the transmitted slot cycle index value.

29. (Previously Presented) The method of claim 14, wherein the stored subscriber information includes billing information stored in at least one billing center.

30. (Previously Presented) The method of claim 14, wherein the stored subscriber information includes registration information stored in at least one home location register.